

ABSTRACT OF THE DISCLOSURE

A memory device for performing graphics functions, and a method of processing depth data that is received by a memory controller. The memory device includes a memory cell array, and a data modifying circuit. The data modifying circuit includes a register for storing external depth data received from the memory controller. The data modifying circuit also includes a compare circuit which compares the stored external depth data with corresponding internal depth data stored in the memory cell array, and updates the memory cell array accordingly. The compare circuit also outputs status signals, thus reporting to the memory controller whether the data was updated or not. Depending on a first control signal, a control circuit helps the external data be written directly to the memory, bypassing the data modifying circuit. Depending on a second control signal, the comparison is in X bits or NX bits.